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RATNERPRESTIA P.O. BOX 980 VALLEY FORGE, PA 19482			EXAMINER CIGNA, JACOB JAMES	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/582,456	Applicant(s) WIPPRECHT ET AL.	
	Examiner JACOB J. CIGNA	Art Unit 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 6-7, 9-11, 14-15, 17, 19, 20, 23, and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE).

3. As to claim 1, CLARKE discloses **a web-processing roller** (CLARKE discloses a resilient roller capable of processing webs), **comprising a roller body having at least one hollow space defined therein** (roller 29 has space 9 between the sleeve 2 and the core member 1 (Figure 1)), **wherein the hollow space is at least partially filled with a mixture consisting of a liquid** ("The space 9 between the sleeve 2 and core member 1 is filled with a material that is liquid under the intended conditions of use of the roller" (Column 3 lines 1-3).) **and at least one insoluble co-ingredient in the liquid, formed by solid particles or by another liquid** ("If desired, solid materials or other liquids may be mixed with the filled material provided they remain uniformly dispersed in the filling material in order to improve its thermal conductivity properties" (Column 6 lines 43-47).).

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4. As to claim 3, CLARKE discloses the web-processing roller according to claim 1, wherein **the mixture is under a pressure burden** ("It is also preferable that the roller be pre-pressurized, i.e. filled with a filling material under pressure" (Column 5 lines 40-42).).

5. As to claim 6, CLARKE discloses the web-processing roller according to claim 1, wherein **at least one chamber which is variable in its volume is arranged in the hollow space** (the space 9 comprises a chamber which has a variable volume, as evidenced by the o-ring 4 and sleeve 7 shown in Figure 1. As the sleeve 7 and o-ring 4 combination is threaded further or closer to the o-ring 3, the volume of the chamber changes.).

6. As to claim 7, CLARKE discloses the web-processing roller according to claim 6, wherein **the chamber comprises a flexible chamber wall** (a chamber wall is the o-ring 3,4 which are taught to be flexible.).

7. As to claim 9, CLARKE discloses the web-processing roller according to claim 6, wherein **the chamber comprises a moving chamber wall** (as discussed in the rejection of claim 6, the o-ring 4 moves, which changes the volume of the chamber.) .

8. As to claim 10, CLARKE discloses the web-processing roller according to claim 9, wherein **the chamber wall is mounted, such that it can move, by another chamber wall** (Examiner interprets the term, "by" to mean that the chamber wall is mounted such that it can move *past* another chamber wall. Examiner recognizes that it would also be reasonable for a person having ordinary skill in the art to read the claim limitation to mean that the another chamber wall causes the chamber wall to move.

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Under Examiner's interpretation, the o-ring 4 (the chamber wall) moves past metal sleeve 2 (another chamber wall)).

9. As to claim 11, CLARKE discloses the web-processing roller according to claim 6, wherein **the chamber is formed by elastic bellows**. This is a product by process claim. The roller disclosed by CLARKE overcomes this limitation because the roller 29 is capable of having a chamber formed by elastic bellows. For more information about Product by Process claims, please refer to MPEP §2113. Under a different interpretation of claim Examiner recognizes that the word, "formed," maybe used as an adjective instead of the verb. Under this interpretation, CLARKE teaches o-rings 3 and 4 which comprise the chamber. O-rings 3 and 4 are elastic bellows.

10. As to claim 14, CLARKE discloses the web-processing roller according to claim 1, wherein **the roller** (roller 29) **comprises a roller shell** (thin metal sleeve 2) **which forms a container wall for the mixture** (as shown in Figure 1, the sleeve 2 forms a wall for the hollow space 9 and the chamber.).

11. As to claim 15, CLARKE discloses the web-processing roller according to claim 1, wherein **the roller** (roller 29) **includes a roller shell** (metal sleeve 2) **and a cylindrical body surrounded by the roller shell** (core member 1 is surrounded by the roller shell), **and wherein the mixture is arranged between the roller shell and the cylindrical body** (between the shell 2 and the core 1 is the hollow space 9 and the chamber, where the mixture is (Column 3 lines 1-3).).

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12. As to claim 17, CLARKE discloses the web-processing roller according to claim 15, wherein **the cylindrical body forms a container wall for the mixture** (the core 1 is shown in Figure 1 to provide a wall for the mixture).

13. As to claim 19, CLARKE discloses the web-processing roller according to claim 15, wherein **the roller is a displacement-type roller and a displacement body forms the cylindrical body** (as shown in Figures 1 and 5).

14. As to claim 20, CLARKE discloses the web-processing roller according to claim 1, wherein **at least one container forming the hollow space is arranged in the roller** (the sleeve 2 is a container which helps to form the hollow space in the roller 29).

15. As to claim 23, CLARKE discloses the web-processing roller according to claim 1, wherein **the solid particles are a granular solid** (CLARKE teaches that the filling material may be mixed with solid materials, the solid materials preferably being uniformly dispersed. It is inherent that the solids particles are granular if the solid is comprised of more than one individual particle. The solid is more than one particle since it is taught to be materials which are evenly dispersed (Column 6 lines 43-47).).

16. As to claim 25, CLARKE discloses the web-processing roller according to claim 9, wherein **the chamber wall is guided, such that it can move, by another chamber wall** (Examiner interprets the term, "by" to mean that the chamber wall is mounted such that it can move *past* another chamber wall. Examiner recognizes that it would also be reasonable for a person having ordinary skill in the art to read the claim limitation to mean that the another chamber wall *causes* the chamber wall to move. Under

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Examiner's interpretation, the o-ring 4 (the chamber wall) moves past metal sleeve 2 (another chamber wall)).

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE) as applied to claim 1 above, and further in view of Sulzer-Escher Wyss (German Patent Publication DE-9301059-U hereinafter referred to as SULZER).

19. As to claim 2, CLARKE teaches the web-processing roller according to claim 1, but does not teach **the mixture exhibits a pulpy consistency**. However, SULZER teaches a similar roller which has an outer sleeve and an inner core, the space between the outer sleeve and inner core is filled with at least dampening liquid. SULZER teaches that the degree of the attenuation depends in particular on the quantity of the moved liquid, the viscosity of the liquid as well as the flow resistance. Thus, SULZER teaches that it would have been a matter of experimentation with a known variable (viscosity) in order to produce a desirable outcome (appropriate damping). As CLARKE teaches the mixture of solids with liquids, it is further well known in the art that a mixture of solids and liquids in the correct ratio becomes pulpy. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have

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provided the mixture such that it exhibited a pulpy consistency because one would have recognized that the consistency of the mixture would have been directly related to the viscosity of the liquid, the viscosity being a matter of simple experimentation.

20. As to claim 4, CLARKE teaches the web-processing roller according to claim 1, but does not teach **the mixture is under a partial vacuum**. However, SULZER teaches a similar roller which has an outer sleeve and an inner core, the space between the outer sleeve and inner core is filled with at least dampening liquid. SULZER further teaches that to prevent steam bubbling in the liquid, the pressure in the annular space can be from 1-3 bar. Atmospheric pressure is generally agreed to be equal to 1 atmosphere (atm). The conversion from bar to atm is 1 bar : 0.9869 atm. Thus, at 1 bar as taught by SULZER, the pressure inside the annular space is under a partial vacuum as compared to the atmospheric pressure, since the pressure is less than 1 atm. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the mixture under a partial vacuum as taught by SULZER in the roller as taught by CLARKE because one would have recognized that the pressures of the annular space would have provided excellent damping as well as web-pressing properties.

21. Claims 5, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE) as applied to claims 3, 1, and 1 above respectively, and further in view of Lehtovirta et al (US Patent 5,919,297 hereinafter referred to as LEHTOVIRTA).

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22. As to claim 5, CLARKE teaches the web-processing roller according to claim 3, but does not teach **a fluid conduit leads into the hollow space and the mixture can be charged with the pressure burden via the fluid conduit**. However, LEHTOVIRTA teaches a roll having an annular chamber defined between an outer sleeve and an inner core (See Figure 1). The roll is used for paper making, and in use, is damped.

LEHTOVIRTA teaches pressure inside of the roll due to the inflow and outflow of coolant. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided a fluid conduit (pipe 6) leading into the hollow space (inner core 7) and the mixture can be charged with the pressure burden via the fluid conduit as taught by LEHTOVIRTA because one would have recognized that the fluid conduit of LEHTOVIRTA would have provided an easy way to add or reduce the amount of mixture in the roll at any given time.

23. As to claim 21, CLARKE teaches the web-processing roller according to claim 1, wherein **at least one thermal treatment channel for conducting a heating or cooling fluid extends through the roller body of the roller** (the channel of CLARKE in the hollow space 9 is capable of conducting heating or cooling fluid, and extends through the roller body.). CLARKE does not teach the channel **ports at at least one axial end of the roller body**. However, LEHTOVIRTA teaches a roll having an annular chamber defined between an outer sleeve and an inner core (See Figure 1). The roll is used for paper making, and in use, is damped. Further, LEHTOVIRTA teaches that the chamber containing the liquid used to incur the damping is connected to a pipe 6 which is ported at one axial end of the roller body as shown in Figure 1. Therefore it would

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have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the channel ported at at least one axial end of the roller body as taught by LEHTOVIRTA because one would have recognized that the position of the ported pipe at the axial end of the body would have allowed the roller to rotate on its axis unimpeded.

24. As to claim 22, CLARKE teaches the web-processing roller according to claim 1, but does not teach **at least one thermal treatment channel for conducting a heating or cooling fluid extends through the roller body of the roller and ports at both axial ends of the roller body**. However, LEHTOVIRTA teaches a roll having an annular chamber defined between an outer sleeve and an inner core (See Figure 1). The roll is used for paper making, and in use, is damped. Further, LEHTOVIRTA teaches that the chamber contains heating or cooling liquid such that the temperature of the liquid is used to incur the damping. The axial channel is connected to a pipe 6 which is ported at one axial end of the roller body as shown in Figure 1, and passages 8 which are at the other axial end of the roller. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided at least one thermal treatment channel for conducting a heating or cooling fluid extends through the roller body of the roller and ports at both axial ends of the roller body as taught by LEHTOVIRTA because one would have recognized that the thermally treating the mixture as taught by LEHTOVIRTA would have provided increased damping.

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25. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE) as applied to claim 6 above, and further in view of Ide (US Patent 5,007,304 hereinafter referred to as IDE).

26. As to claim 8, CLARKE teaches the web-processing roller according to claim 6, but does not teach **the chamber is a bubble**. An inspection of Applicant's specification does not give any definition of the term "bubble" beyond the general terms "elastic" and 'not rigid' in reference to the chamber walls, as well as having a pressure differential between the inside and the outside of the chamber. Examiner acknowledges that the walls of CLARKE are on the whole rigid, but are elastic at the o-rings, and have a pressure differential between the inside and outside. Further, IDE teaches a fluid-filled elastomeric damping device in which there is a chamber 18 which is entirely surrounded by the elastomeric body 16. The chamber is filled with hydraulic fluid. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have surrounded the chamber of CLARKE with an elastomeric body 16 as taught by IDE in order to make the chamber a bubble because one would have recognized that the deformability of the chamber would have aided the damping.

27. Claims 12, 13, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE) as applied to claim 1 above, and further in view of Panossian (US Patent 5,365,842 hereinafter referred to as PANOSSIAN).

28. As to claim 12, CLARKE teaches the web-processing roller according to claim 1, but does not teach **a rotational axis of the roller extends through the mixture in the**

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hollow space. CLARKE teaches instead that the axis of the roller extends through the core member 1, which is not taught to have a hollow space. PANOSSIAN teaches a roller with non-obstructive particle damping having damping material 12 in cavities 26 arranged around the circumference of the roller as well as a cavity 26 arranged through the center axis of the roller. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the rotational axis of the roller of CLARKE extending through the mixture in the hollow space as taught by PANOSSIAN because one would have recognized that having a cavity through the center of the core member would have increased the amount of mixture available to perform damping, and would have therefore have improved the damping of the roller.

29. As to claim 13, CLARKE teaches the web-processing roller according to claim 1, wherein **the hollow space is rotationally symmetrical with respect to a rotational axis of the roller** (as taught by CLARKE Figure 1, the hollow space is arranged circumferentially of the core member 1 and is thus rotationally symmetrical with the rotational axis of the roller). CLARKE does not teach the hollow space **is one hollow space of a number of hollow spaces which together form a rotationally symmetrical arrangement of hollow spaces with respect to the rotational axis.** However, PANOSSIAN teaches a roller with non-obstructive particle damping having damping material 12 in cavities 26 arranged around the circumference of the roller. Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided a number of hollow spaces which

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together form a rotationally symmetrical arrangement of hollow spaces with respect to the rotational axis as taught by PANOSSIAN because one would have recognized that the plurality of cavities would have provided superior strength to the cylinder while still providing adequate damping (PANOSSIAN Column 3 lines 4+).

30. As to claim 16, CLARKE teaches the web-processing roller according to claim 1, wherein **the roller includes a roller shell (sleeve 2) and a cylindrical body surrounded by the roller shell** (core member 1 is surrounded by sleeve 2 as shown in Figure 1), but does not teach **the mixture is arranged within the cylindrical body**.

With reference to the rejection of claim 12, PANOSSIAN teaches a cavity for holding the damping mixture through the rotational axis of the roller. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the mixture arranged within the core member 1 of CLARKE by being at the center of the roller as taught by PANOSSIAN because one would have recognized that having a cavity through the center of the core member would have increased the amount of mixture available to perform damping, and would have therefore have improved the damping of the roller.

31. As to claim 18, CLARKE teaches the web-processing roller according to claim 1, wherein **the roller comprises a roller shell (sleeve 2) and a cylindrical body surrounded by the roller shell** (core member 1 is surrounded by sleeve 2 as shown in Figure 1), but does not teach **the mixture is arranged between the roller shell and the cylindrical body**. With reference to the rejection of claims 12 and 16, PANOSSIAN teaches a cavity for holding the damping mixture through the rotational axis of the roller.

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Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided the mixture arranged within the core member 1 of CLARKE by being at the center of the roller as taught by PANOSSIAN because one would have recognized that having a cavity through the center of the core member would have increased the amount of mixture available to perform damping, and would have therefore have improved the damping of the roller. CLARKE in view of PANOSSIAN teaches **another mixture consisting of a liquid and at least one insoluble co-ingredient in the liquid is arranged within the cylindrical body** (CLARKE teaches the mixture is comprised of "solid materials or other liquids" (Column 6 line 43). CLARKE teaches that this mixture is arranged in the hollow space in the roller to perform damping. As taught by CLARKE in view of PANOSSIAN, a hollow space is found within the cylindrical body, thus the mixture would also have been arranged within the hollow space in the core member 1).

32. Claim 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Clarke et al. (US Patent 3,699,621 hereinafter referred to as CLARKE) and Sulzer-Escher Wyss (German Patent Publication DE-9301059-U hereinafter referred to as SULZER) as applied to claim 4 above, and further in view of Lehtovirta et al (US Patent 5,919,297 hereinafter referred to as LEHTOVIRTA).

33. As to claim 24, CLARKE in view of SULZER teaches the web-processing roller according to claim 4, but does not teach **a fluid conduit leads into the hollow space and the mixture can be charged with the partial vacuum via the fluid conduit**. LEHTOVIRTA teaches a roll having an annular chamber defined between an outer

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sleeve and an inner core (See Figure 1). The roll is used for paper making, and in use, is damped. LEHTOVIRTA further teaches a fluid conduit 6 leads into the hollow space.

There is no teaching in SULZER as to how to achieve the partial vacuum of 1bar.

However, LEHTOVIRTA teaches a fluid pump system in Figure 3 capable of producing a partial vacuum within the roller due to the arrangement of the pump 13 and resistance element 14. As the pump draws the mixture out of the roller, the mixture is stopped at the resistance element 14 creating higher pressure between the pump 13 and the resistance element 14 and lower pressures within the roller. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have provided a partial vacuum within the hollow space via the fluid conduit because one would have recognized that fluid conduits are well known system elements with which to provide vacuums in rollers.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JACOB J. CIGNA whose telephone number is (571) 270-5262. The examiner can normally be reached on Monday - Friday 9:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JACOB J CIGNA/
Examiner, Art Unit 3726
September 23, 2010

/DAVID P. BRYANT/
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